



GIS IN PLANNING

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Agenda

- Why Planners Need GIS
- Data Rqmts & Sources
- Comman Map Products
- Queries
- Analysis
- GIS Planning Capabilities (Application)
- Army GIS Enterprise Program
- Q&A



Why planners need GIS

- Maintain Maps
 - ☐ Update
 - ☐ Create
 - ☐ Publish
 - ☐ Share
- Query (find) map data
- Analysis



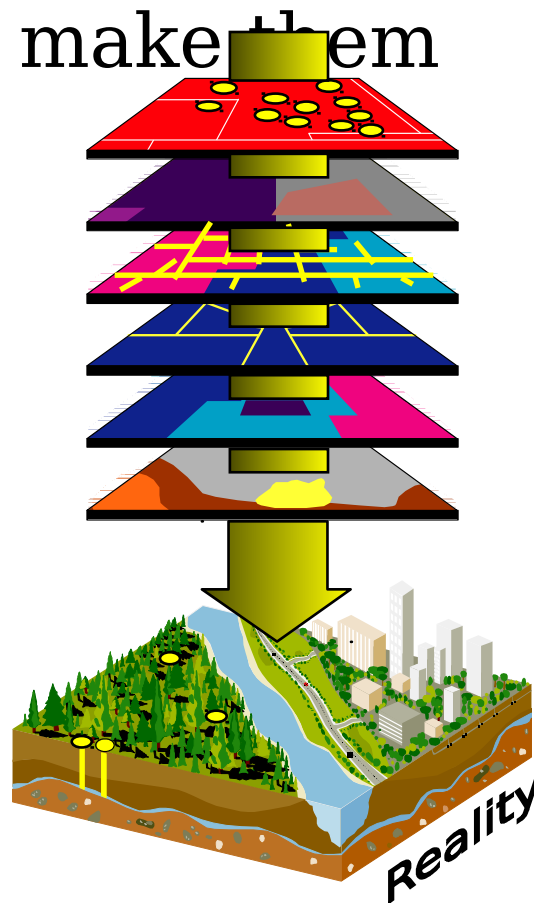
Data requirements and **sources**

- “Backplane” – digital orthophoto
- Building footprint – linked to IFS
- Roads (centerline, curb, or both)
- Utilities
- Drainage
- ITAM
- Environmental Restoration
- Communications
- Noise
- Off installation
 - Demographics
 - Roads
 - Zoning



Common Map Products

- General (Base Map) And how to make them
- Community Setting
- Utilities
- Transportation
- Range and Training Area
- ISR
- Facility Reduction Program
- Space utilization
- Development Constraints
- Planned Development
 - Programmed MILCON (SRC)
 - Future Development





Simple queries

- Where is it?
- How much area?
- How close/far (distance/length)?
- Where are all ([admin, 3d Brigade] facilities)



Analysis

- AT/Force Protection
- Impervious surface/total area
- Mass transit siting
- Organizational hours of duty scheduling



How Do We Bring It Together?

- GIS Integrates All the Parts...to See the Whole!





Why do I Need a Geographic Information

Syst

I need a
common
relevant
operational
picture



- My staff gives me a lot of information, but it isn't integrated!
 - What ranges have active training today?
 - Where are we putting our MILCON projects?
 - What roads are closed today? Where?
 - Where do I have critical infrastructure, or force protection problems?
 - Where are the RCW nesting sites?
- I need to see the combined impact of decisions we have made.
- My managers need to see it too!
- *In real time!*



GIS Links Data to Maps

water_line

datalink:	100004
pipe_id:	utwatpip000000536
map_id:	234
meta_id:	utwatpip000000007
media_id:	utwatpip000000084
coord_id:	97894
date_acqrd:	19730818
dispostn_d:	PERMANENT
use_d:	MAIN
type_d:	CIRCULAR
mat_d:	PVC
size_d:	6
pipe_lgth:	238.4
dim_u_d:	FT
inv_elv_1:	256
grnd_elv_1:	261
inv_elv_2:	254
grnd_elv_2:	257
elv_u_d:	FT

Record: 1 of 1

Spatial search
results

- Geographic Information Systems (GIS)
- Global Positioning System (GPS)
- Computer Aided Design and Drafting (CADD)
- Relational Database Management Systems (RDBMS)
- Digital Imagery Acquisition and Processing

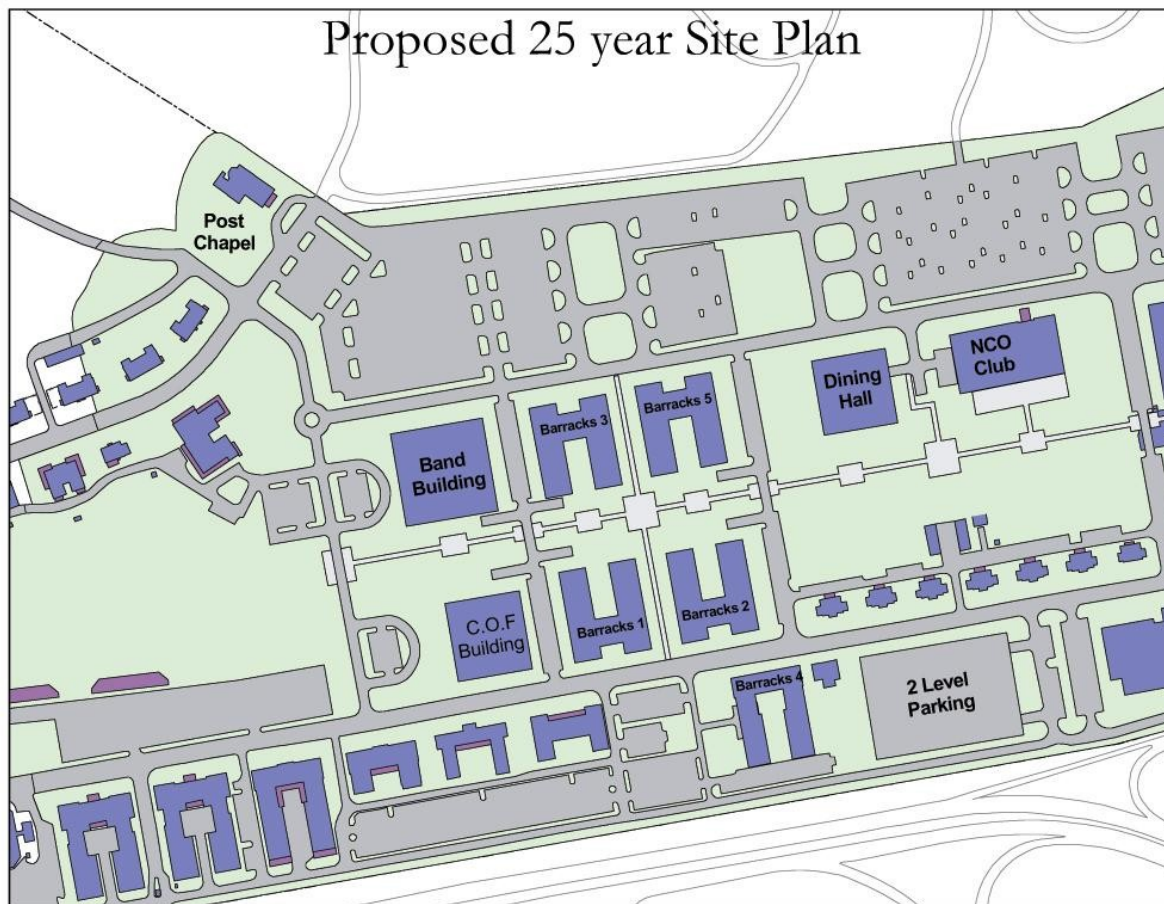


Common Installation ~~GIS Uses~~

- Master Planning
- Force Protection/Critical Infrastructure Planning
- Natural Resource Management
- ISR Evaluation
- Digging Permits
- Range Management



Master Planning - Site Plans



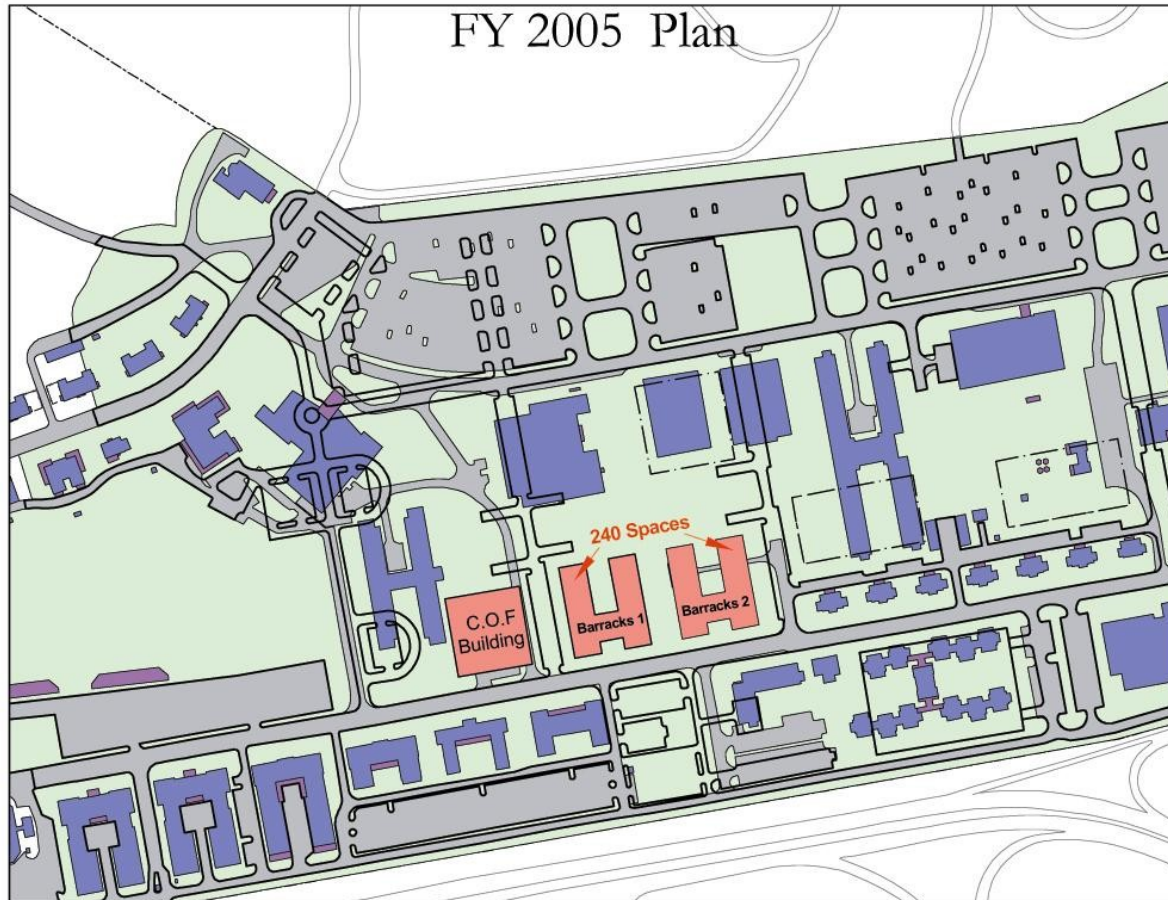


Master Planning Area Development Plans



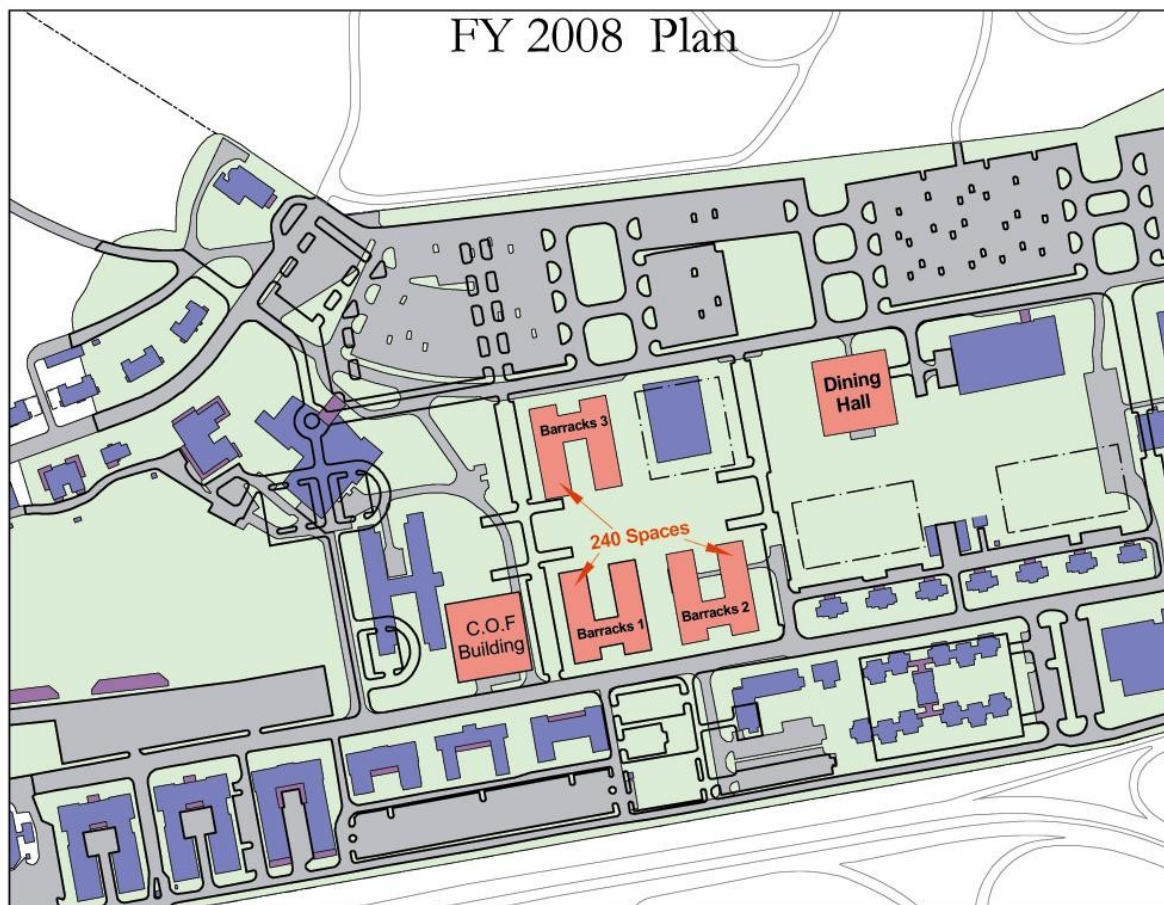


Master Planning Area Development Plans



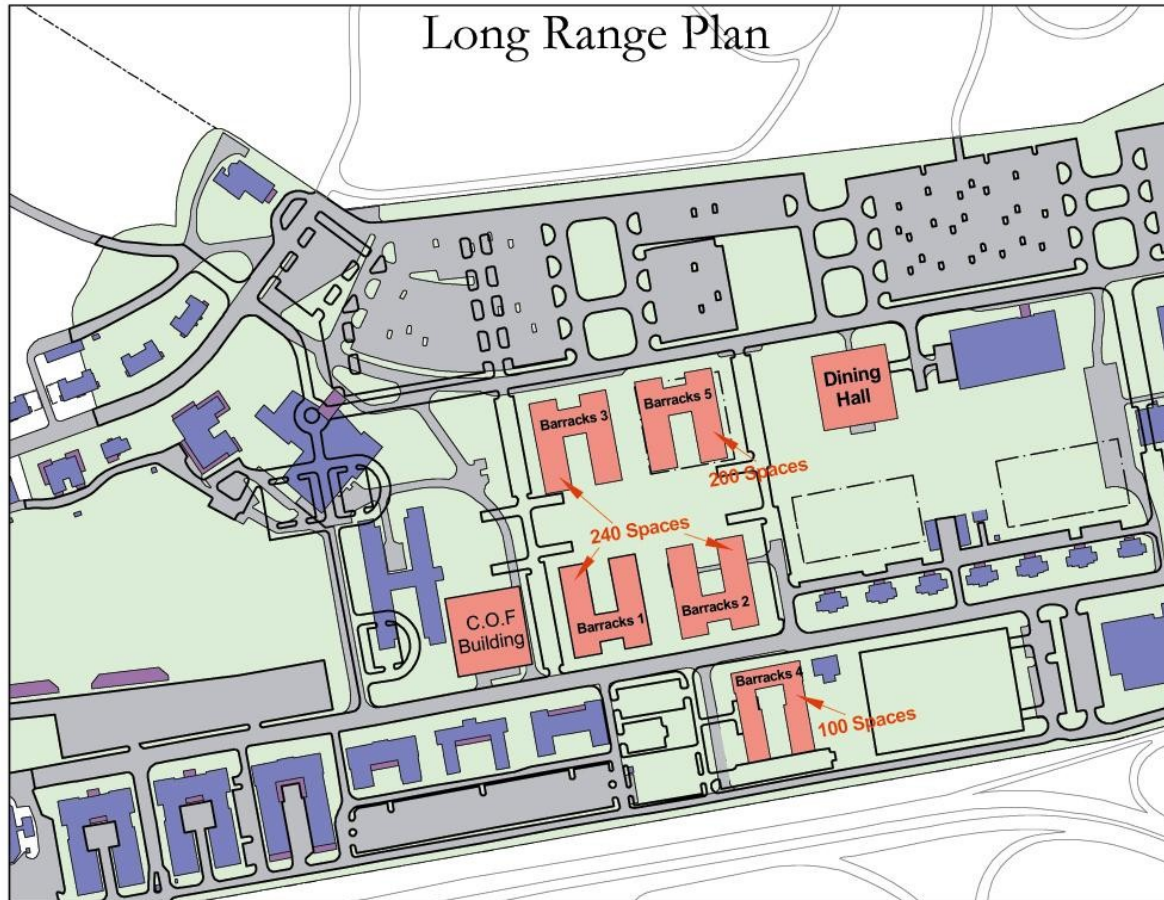


Master Planning - Site Plans



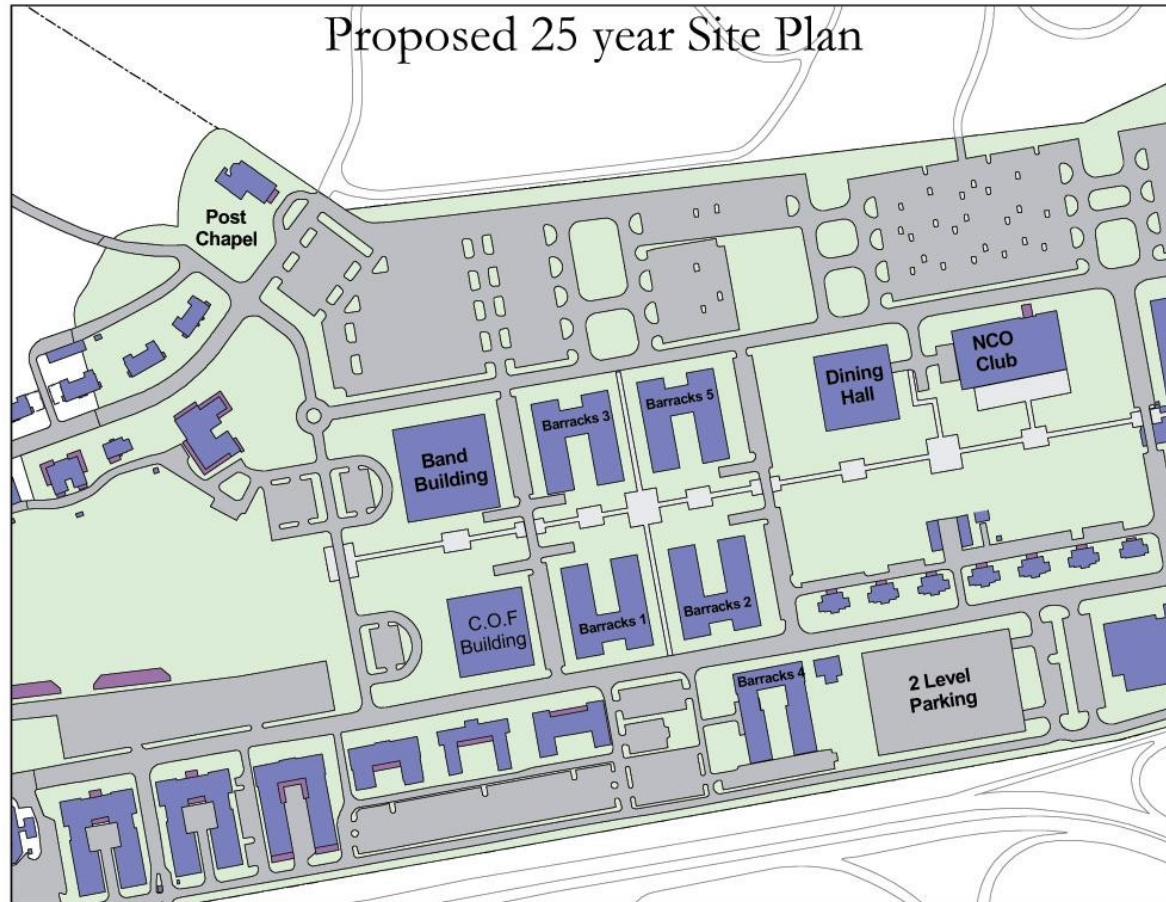


Master Planning - Site Plans





Master Planning - Site Plans





Two Types of GIS

“Standalone”

- Stovepipe data
- Single discipline/business area
- Not networked
- Easy to get started
- Oversight -- limited
- Access Control – Easy
- Limited impact on operation – difficult to discern

Enterprise

- Integrated data
- All business areas
- Networked
- Requires planning/coordination
- Oversight -- critical
- Access Control - complex
- Becomes a vital “utility” – major impact on business processes



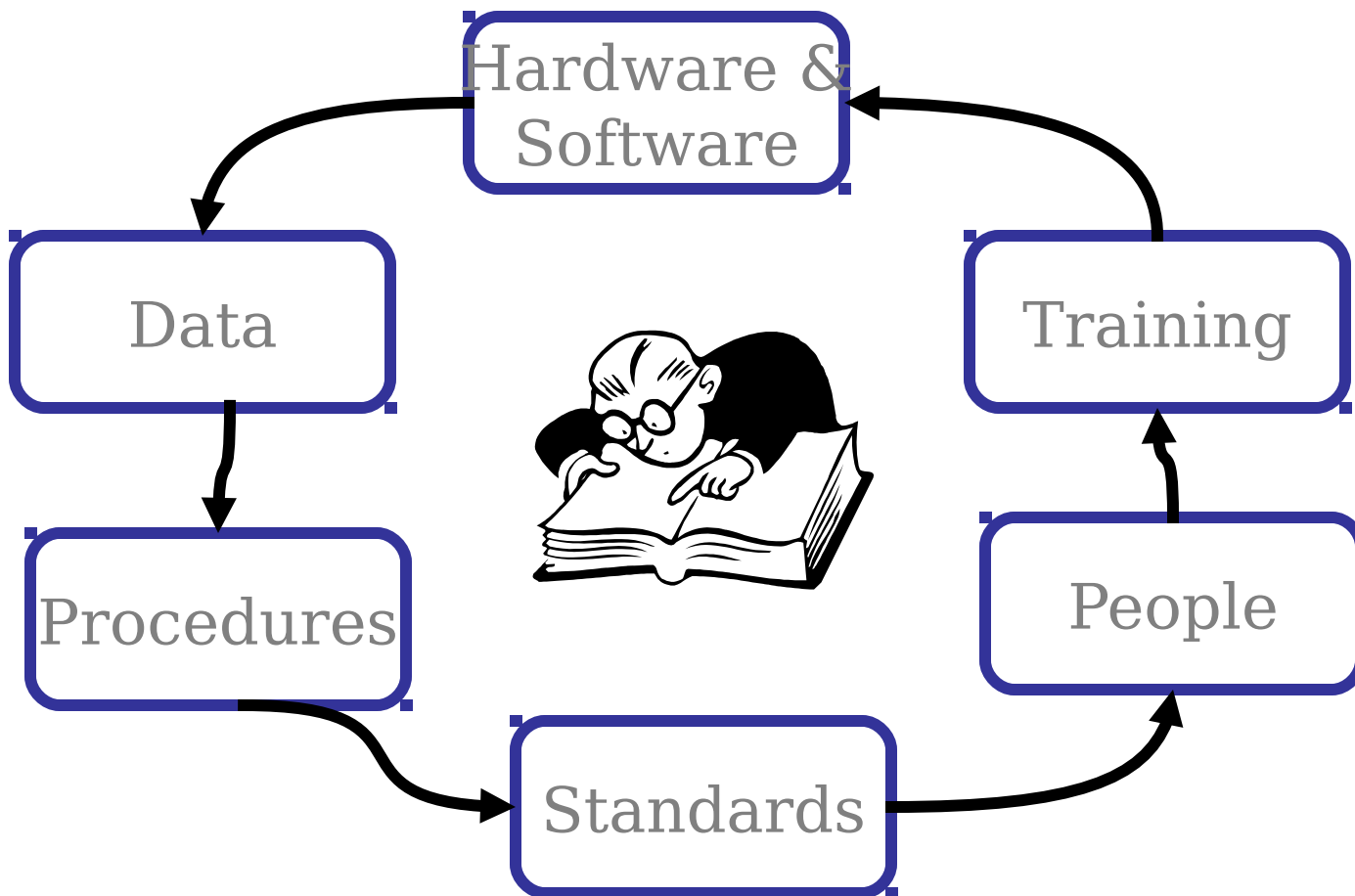
KEY = GIS

Implementation Plan





Success doesn't come out of a box - It's





What the Army needs from your GIS

- **Army Enterprise GIS**
 - GIS Repository (concept demonstration)
 - Critical Infrastructure Program
 - Explosive Safety Sighting Program
 - MILCON siting review
 - And more
- **Emergency Operations - (e.g., HIFLDS)**
- **Data requirements**
 - Current, consistent and accurate
 - SDSFIE Compliant
 - Metadata documented



GIS Policies and Standards

- **Policies**

- Nov 2001 DOT/ACSIM Policy on Data Standards
 - Use Common Data Model (Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE))
 - Use Common Datum/Projections (NAD83, WGS84, UTM)
 - Data Quality
 - FGDC Accuracy Standards
 - Appropriate Scale/Resolution
- Executive Order 12906
 - Document Data According to FGDC
 - Share Documentation and Spatial Data
- DITSCAP Accreditation
- Networthiness (New Requirement)



Army Enterprise GIS Standards & Approvals

- Memorandum #1, 8 August 2001
 - 5 Army Knowledge Management (AKM) Goals:
 - Become Knowledge-Based Organization
 - Central review of IT procurement
 - Integrate Processes and Management
 - Business Initiatives Council (BIC) and Army BIC (G-8)
 - Enterprise Infostructure
 - Server consolidation
 - Army Knowledge Online (AKO) Portal
 - Webify and link all applications
 - Harness Human Capital
 - Implement innovative ideas



Army GIS Enterprise

- CURRENT GIS STATUS
- THE BIG QUESTION?
- PROGRAM STRATEGY
- MASTER PLANNING SUPPORT FY '04
- APPLICATION GOALS
- APPLICATION DEVELOPMENT PROCESS
- ENTERPRISE GOALS
- ENTERPRISE PROGRAM PLAN
- FY04 ACTION STEPS
- INSTALLATION VISUALIZATION TOOL
- GIS ON AKO

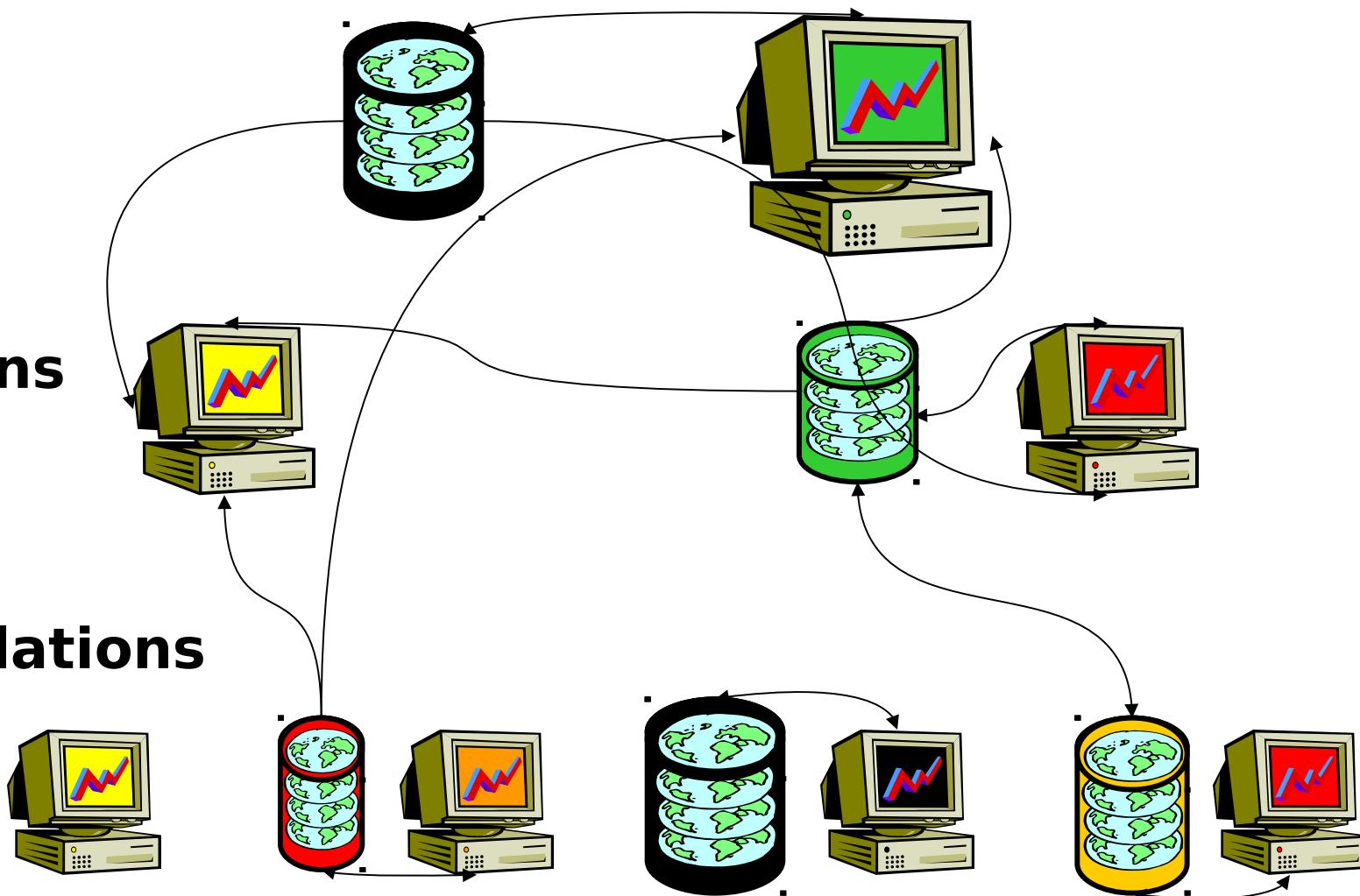


CURRENT GIS STATUS

HQ

Regions

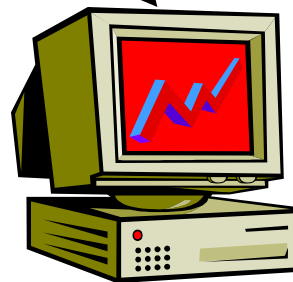
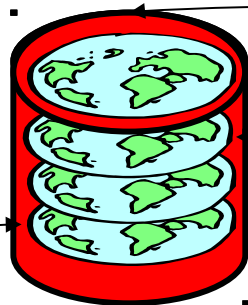
Installations



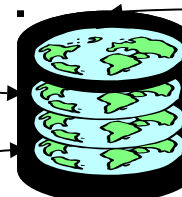


THE BIG QUESTION?

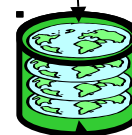
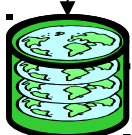
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Regions



Installations



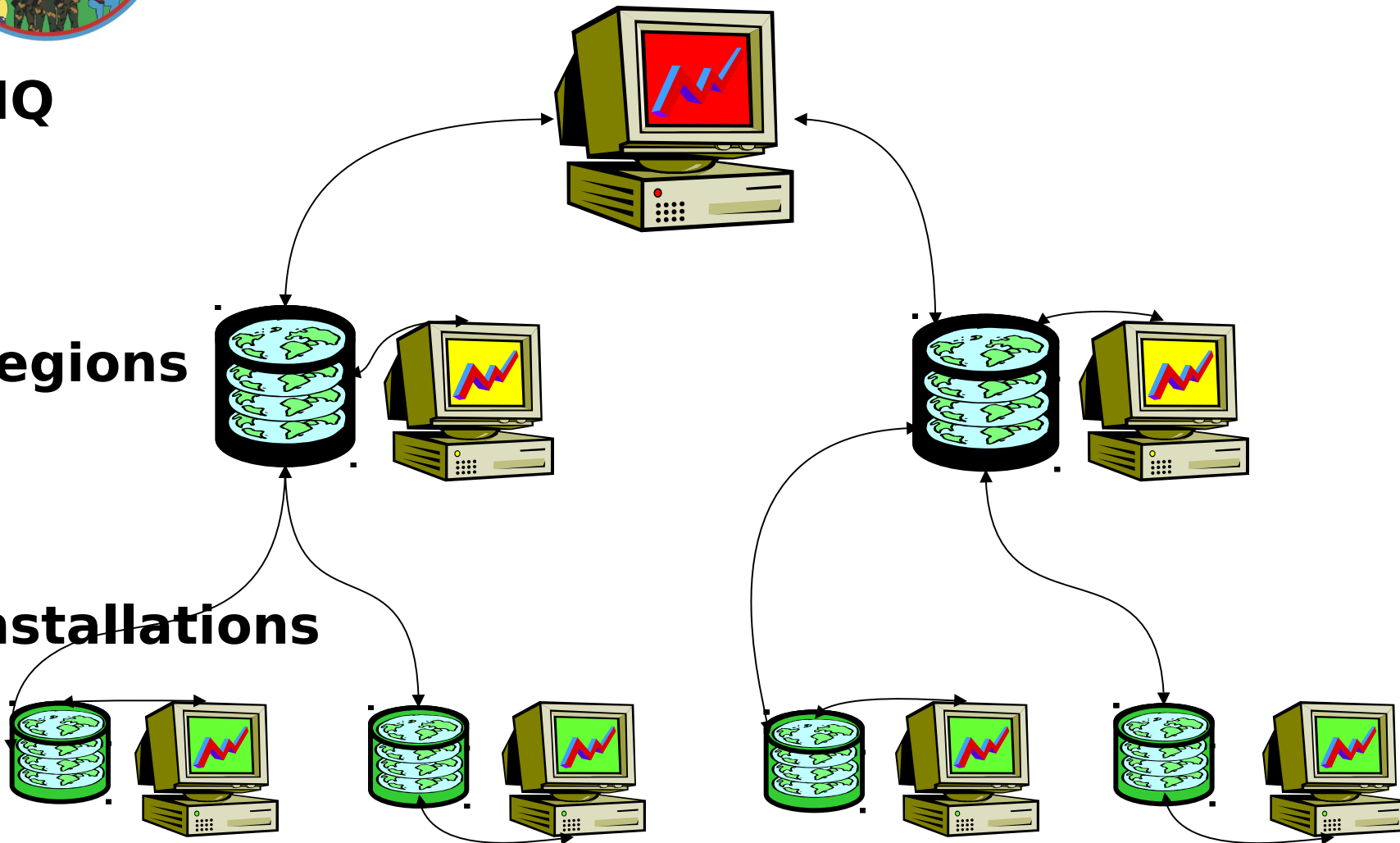


THE BIG QUESTION?

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Installations



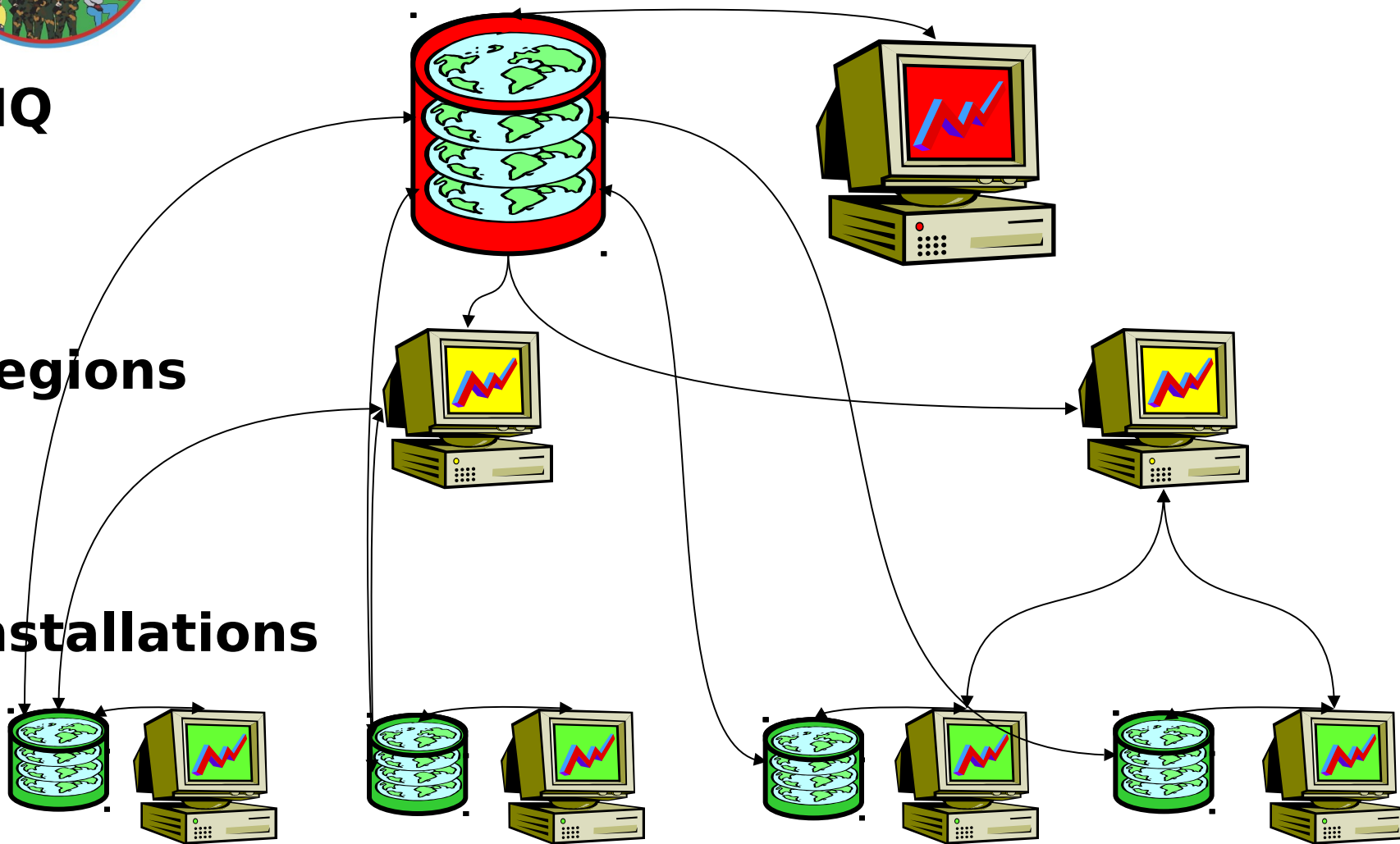


THE BIG QUESTION?

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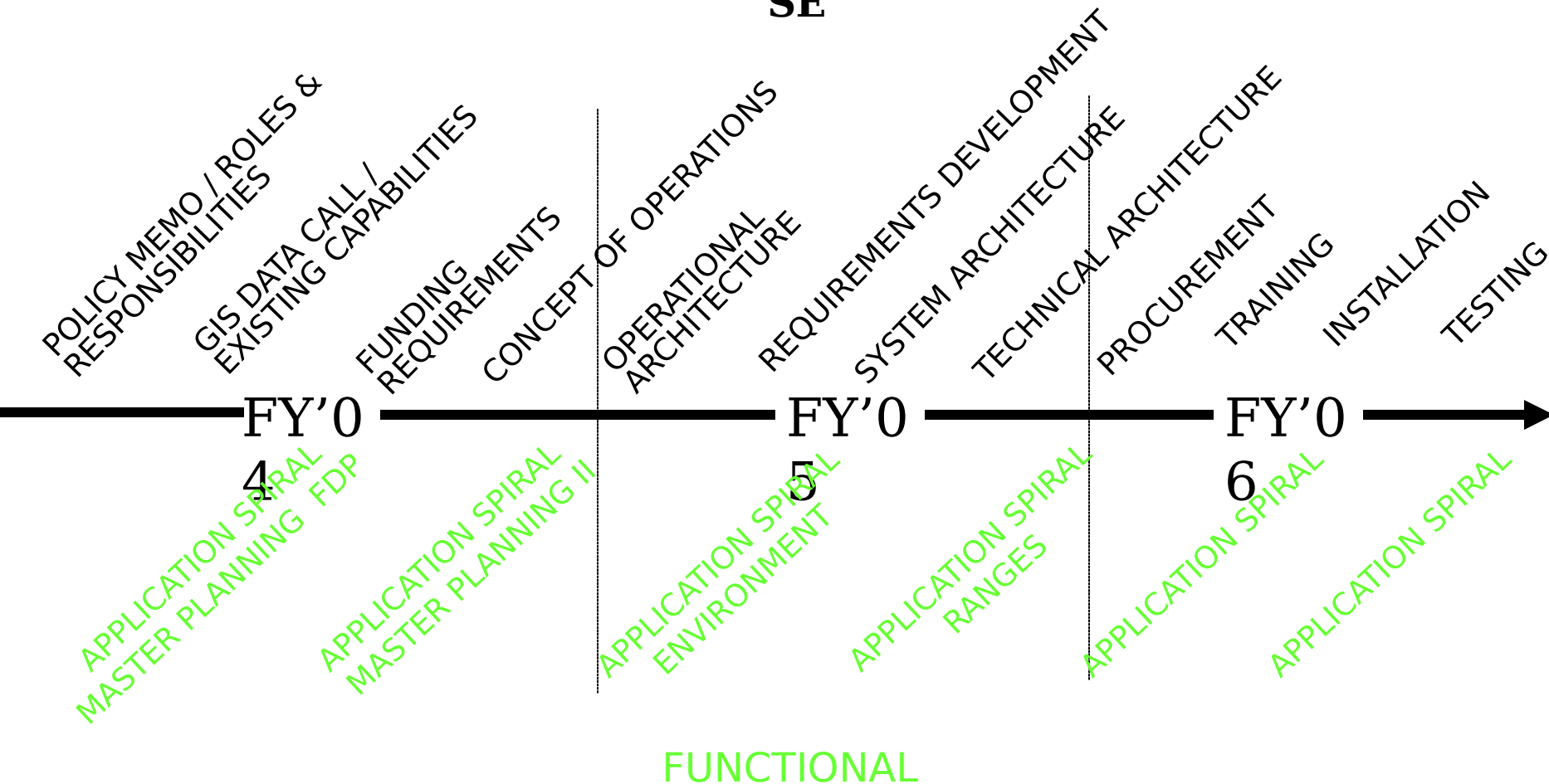
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PROGRAM STRATEGY

ENTERPRISE



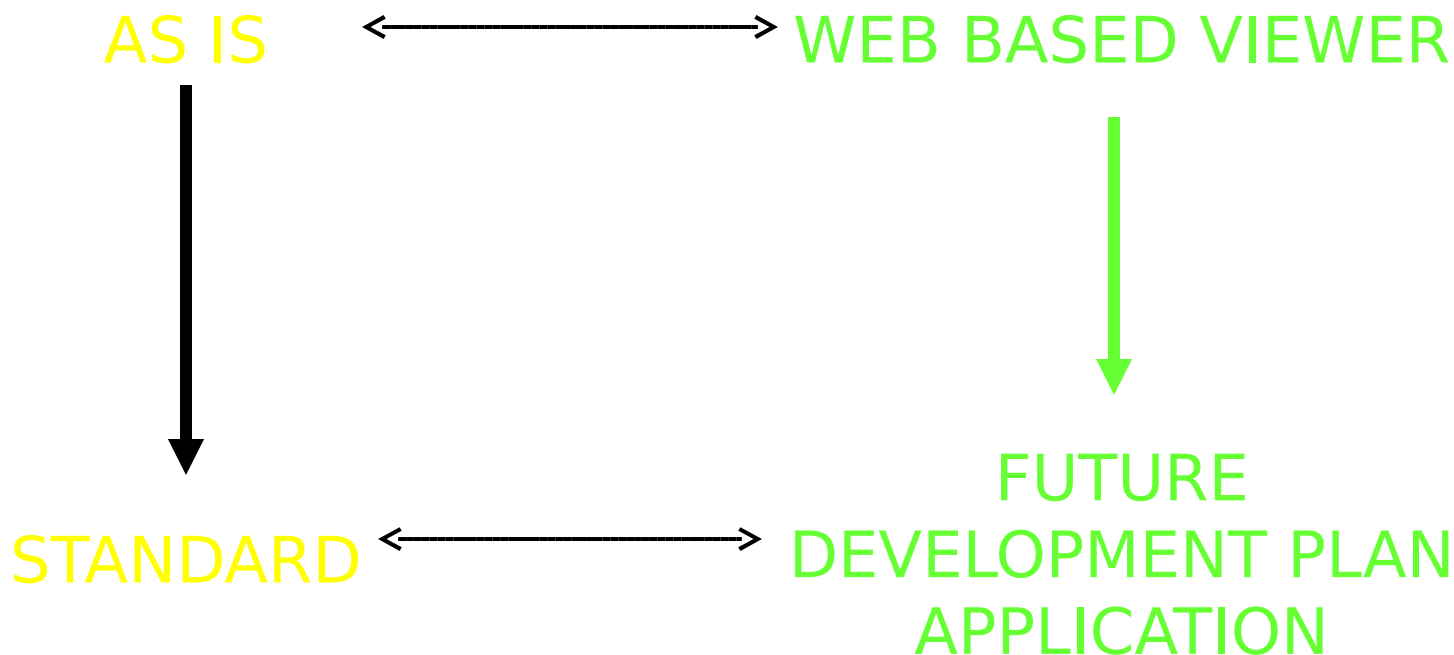


APPLICATION SPIRAL #1

FUTURE DEVELOPMENT PLAN

DATA

APPLICATION





MASTER PLANNING SUPPORT

FY '04

- FOCUS ON FUTURE DEVELOPMENT PLAN VISUALIZATION FOR ALL INSTALLATIONS
- INSTALLATION DATA CALL FOR FUTURE DEVELOPMENT PLAN
- STANDARDIZE FUTURE DEVELOPMENT PLAN MAP TEMPLATES IN GIS
- FUTURE DEVELOPMENT PLAN DATA DESIGN
- INTEGRATE EXISTING DATA SETS WITH FDP VIEWER
- INTEGRATE EXISTING DATA WITH GIS-R
- PROVIDE FUTURE DEVELOPMENT PLAN VIA GIS-R



APPLICATION GOALS

- STANDARD USER INTERFACES / PRODUCT OUTPUT
- CENTRALIZED REQUIREMENTS MANAGEMENT
- BUSINESS PROCESS DRIVEN
- PROVIDE ARMY WIDE WEB-ENABLED ACCESS TO ALL DATA



APPLICATION DEVELOPMENT PROCESS

- IDENTIFY A DISCREET BUSINESS PROCESS
- BUSINESS PROCESS PROPONENT BUY-IN / RESOURCE IDENTIFICATION
- ESTABLISH WORKING GROUP (FUNCTIONAL / GIS EXPERTS)
- CURRENT CAPABILITY ANALYSIS
- IDENTIFY REQUIRED INFORMATION PRODUCTS
- IDENTIFY SYSTEM SCOPE
- CREATE DATA DESIGN
- DETERMINE SYSTEM REQUIREMENTS
- APPLICATION IMPLEMENTATION PLAN



ENTERPRISE GOALS

- COORDINATED IMA WIDE GIS IMPLEMENTATION STRATEGY
- PROVIDE PROCESS IMPROVEMENT BY IMPLEMENTING STANDARD GIS APPLICATIONS ACROSS THE IMA BUSINESS PROCESSES
- PROVIDE COMMON LEVEL OF SUPPORT FOR GIS TO INSTALLATIONS
- STANDARDIZE SPATIAL DATA ACROSS THE ENTERPRISE
- PROVIDE HQ / REGIONAL GIS TOOLS FOR INSTALLATION MANAGEMENT



ENTERPRISE PROGRAM PLAN

- PUBLISH GIS POLICY / ROLES RESPONSIBILITIES MEMO SIGNED BY ACSIM
- EXECUTE ENTERPRISE COMMUNICATION / MARKETING PLAN
- DEVELOP GIS STRATEGY / HIGH LEVEL OPERATIONAL ARCHITECTURE / CONCEPT OF OPERATIONS
- CONDUCT DATA CALL TO ID CURRENT GIS APPLICATIONS AND CAPABILITIES
- ESTABLISH GIS WG UNDER ACSIM CIO INTEGRATION BOARD (CIB)



ENTERPRISE PROGRAM PLAN CON'T

- IDENTIFY & PRIORITIZE BUSINESS PROCESSES REQUIRING APPLICATION INTEGRATION
- IDENTIFY FUNDING TO SUPPORT REQUIREMENTS
- DEVELOP AND IMPLEMENT COMMON HTML INTERFACE TO GIS-R
- SYNCHRONIZE EXISTING DATABASES WITH OACSIM GIS-R
- DEVELOP GIS-R SECURITY APPLICATION
- DEVELOP AND MAINTAIN GIS ENTERPRISE ARCHITECHTURE

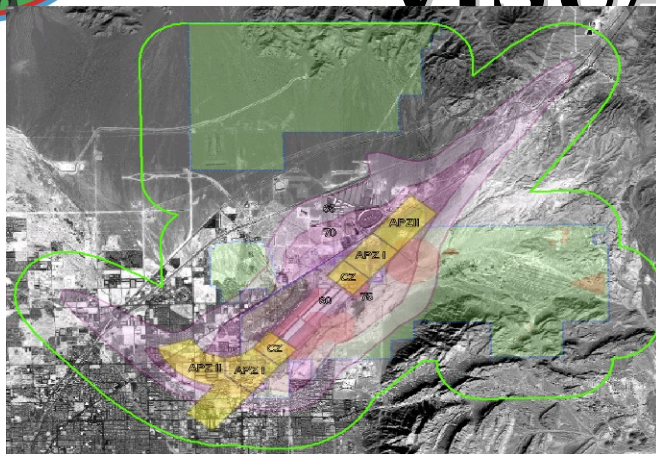


FY04 ACTION STEPS

1. DRAFT POLICY / ROLES & RESPONSIBILITIES MEMO (NOV-DEC '03)
2. ESTABLISH WORKING GROUP UNDER CIB (NOV '03)
3. PUBLISH PLAN TO THE FIELD (DEC '03)
4. DATA CALL TO REGIONS - ID APPS (DEC '03)
5. IDENTIFY / PRIORITIZE DATA SOURCES FOR GIS-R INTEGRATION (DEC'03)
6. DATA MANAGEMENT STRATEGY (JAN '03)
7. DRAFT MASTER PLANNING FDP GIS TEMPLATE (JAN '04)
8. DRAFT FDP DATA DESIGN (FEB '04)
9. INTEGRATE REGIONAL FDP DATA SETS WITH VIEWER (FEB - JUL '04)
10. INTEGRATE DATA SOURCES WITH GIS-R (MAR - JUN '04)
11. MP FUTURE DEVELOPMENT CAPABILITY THROUGH GIS-R (APR - SEP '04)



INSTALLATION VISUALIZATION TOOL



INITIAL IVT LAYERS

- COMMERCIAL GEOREFERENCED SATELLITE IMAGERY
- INSTALLATION BOUNDARY
- NOISE CONTOURS (65+ DB)
- ACCIDENT POTENTIAL ZONES
- EXPLOSIVE SAFETY ARCS
- FLOODPLAINS
- WETLANDS

IVT GOALS

- **SITUATIONAL AWARENESS FOR BRAC 2005 DELIBERATIONS**
- **STANDARD DATA**
- **NO NEW DATA**
- **1 MAY 04 DELIVERY**

ARMY BENEFITS

- **TITLE 50 IMAGERY**
- **REGIONAL COORDINATOR**
- **GIS-R SYSTEM**
- **INITIAL STANDARD DATA DEVELOPMENT**



GIS ON AKO

COLLABORATE



ARMY KCC HOME



ARMY
COMMUNITIES
ACSIM



IMA



PLANS



IT INTEGRATION



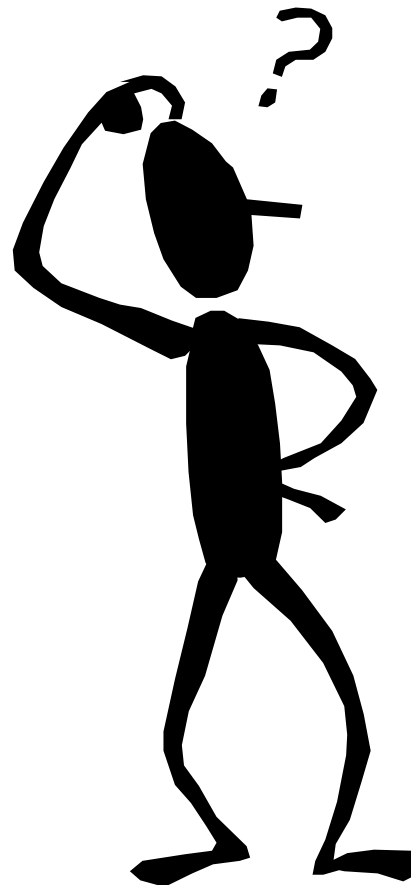
GIS

**GIS
DOCUMENTS
FOUND HERE**





Q&A





Points of Contact

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